Received 10/12/05 by V. Janosik, RPM

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To Victor Janosik/R3/USEPA/US@EPA

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Subject Lord-Shope August, 2005 Monthly Progress Report & Review of Proposed Activated Carbon Adsorption System

Vic,

I reviewed the August, 2005 monthly progress report for the Lord-Shope thermal oxidizer as well as Lord's request to change their treatment of the offgas of the ISVS system from the thermal oxidizer to an activated carbon adsorption system.

For the August reporting period, three samples from the thermal oxidizer were collected and submitted for analysis using EPA Method TO-15 to an independent laboratory. Phosgene was not detected in the oxidizer's exhaust. The oxidizer's efficiency during this reporting period was 98.5% which was a substantial drop in efficiency from the July reporting period (99.4%) but in the historical operational range of the oxidizer. The amount of total VOCs in July was 250 ppm. During the August reporting period, the amount of total VOCs has increased to 342 ppm.

Proposal for Activated Carbon Adsorption System

Lord Corporation has requested to change their treatment of the offgas from the ISVS system to an activated carbon adsorption system. The use of activated carbon adsorbers may be a viable method of controlling the landfill emissions, however Lord Corporation must submit to EPA proof that the adsorbers will satisfy their obligations. The activated carbon adsorbers will not be efficient at capturing methane. If Lord Corporation is required to control the emissions of methane from the ISVS system, then Lord must propose how they will treat or capture the methane emissions. Vinyl chloride is another low molecular weight compound found in the emissions from the ISVS system, albeit, in low concentrations. It is also a compound that will easily break through the carbon vessels. Lord Corporation has to demonstrate that the activated carbon adsorption system will adequately capture vinyl chloride and other low-molecular weight compounds.

EPA requests detailed information on the activated carbon adsorption system as specified below.

1. What will be the size of the carbon vessels? How much activated carbon will they contain?

2. What will be the operating temperature of the carbon vessel system?

3. What is the calculated loading point and break-through point for the contaminants, especially the low-molecular compounds such as vinyl chloride, taking into account that the amount of VOCs in the influent gas may fluctuate in a wide range?

4. The diagram of the proposed activated carbon adsorption system contains a condensation collection tank. What is the projected humidity of the influent stream before and after pretreatment as the influent stream enters the carbon vessels?

5. Will pretreatment of the influent stream be necessary for corrosive, reactive, or oxygenated compounds such as ketones, aldehydes, 1,1,1-trichloroethane, and organic acids? If so, details for pretreatment of these compounds should be submitted to EPA.

6. Details on the expected maintenance needs of the activated carbon adsorption system should be submitted to EPA. Has a maintenance plan been considered in case plugging or fouling of the system occurs?

7. Lord Corporation needs to submit to EPA a more vigorous plan to test for breakthrough than what

is written in the proposal. The proposal states that sampling will be completed monthly during the first year of operation, and they anticipate that the activated carbon may be changed every three months. Lord Corporation needs to substantiate their proposal to sample only once a month for breakthrough. EPA expects that Lord Corporation will schedule changing the carbon vessels before the effective adsorption point of the carbon is compromised, not afterwards.

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If you have any questions or concerns, please contact me at x2193

- Pat

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